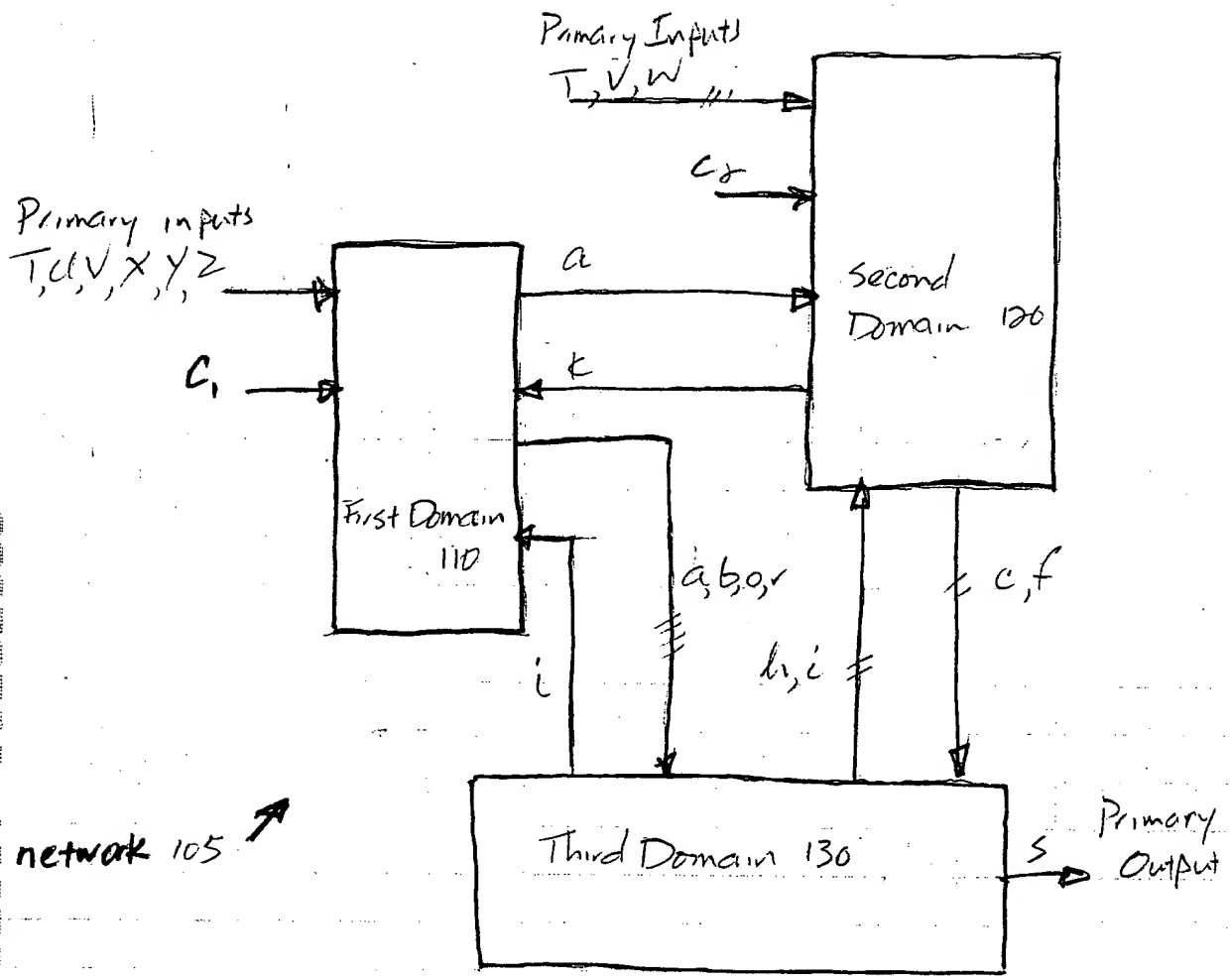

Primary Inputs
T, V, W
Primary inputs
T, U, V, X, Y, Z
C_1
C_2
a
b
First Domain
110
Second
Domain 120
Third Domain 130
a, b, g, r
b, i
c, f
i
s
Primary
Output
network 105

FIGURE 1

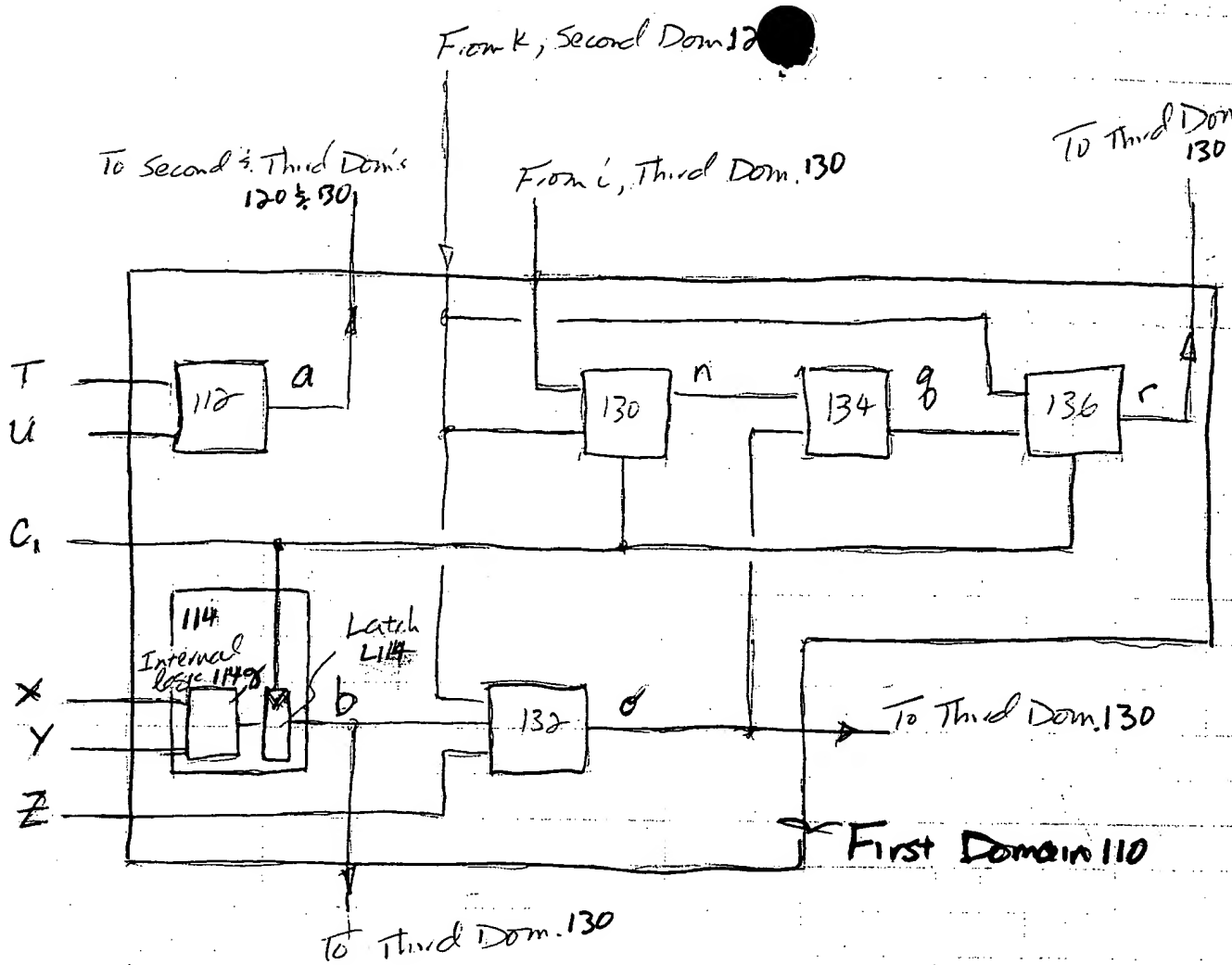

From k, Second Dom. 120
To Second & Third Dom's 120 & 130
From i, Third Dom. 130
To Third Dom. 130
T
U
C_1
X
Y
Z
112
a
130
n
134
q
136
r
114
Internal logic 114a
Latch 114b
b
132
d
To Third Dom. 130
First Domain 110
To Third Dom. 130

FIGURE 2

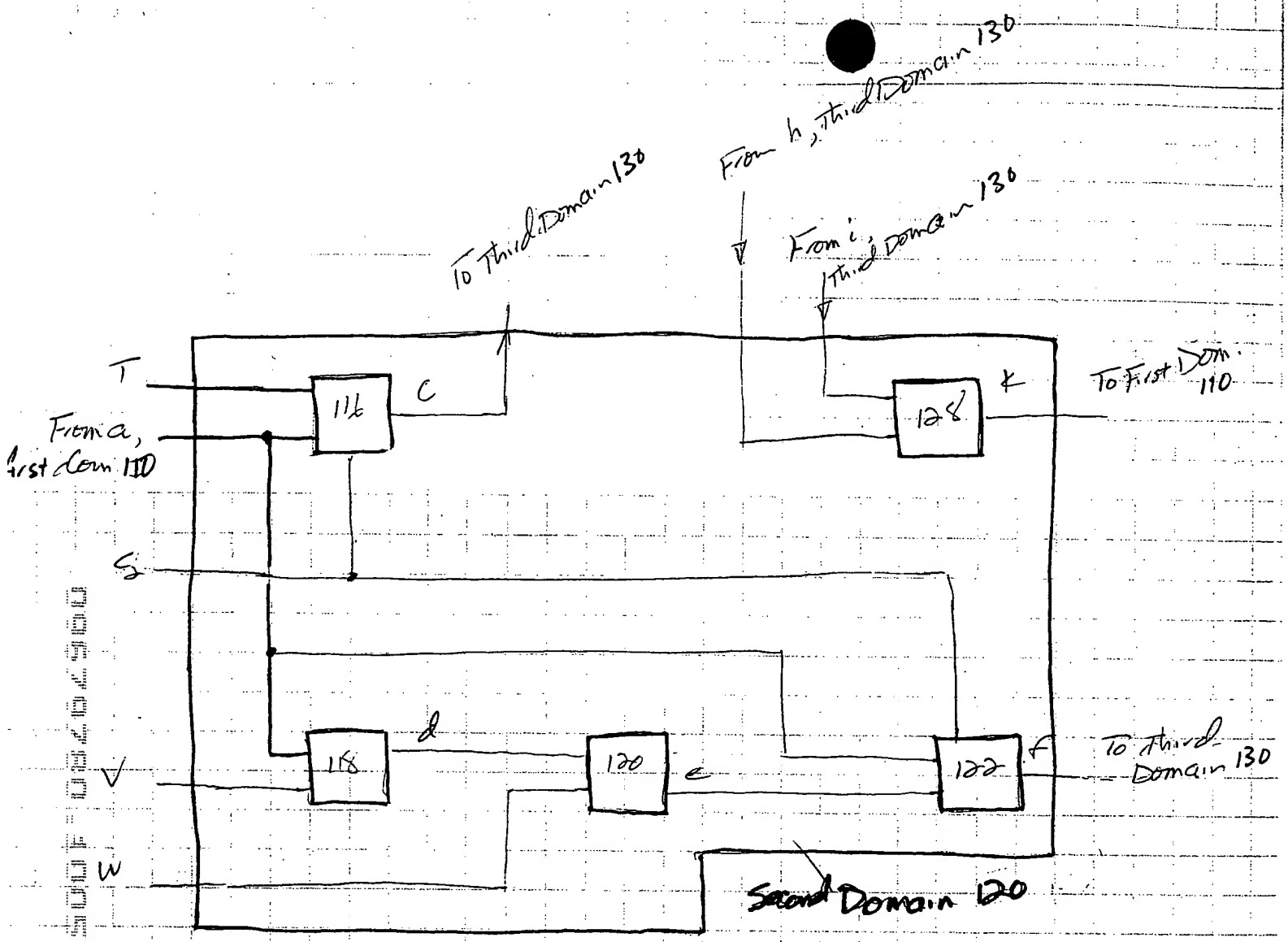

To Third Domain 130
From h, Third Domain 130
From i, Third Domain 130
T
From a, First Dom 110
S
V
W
116
C
128
K
To First Dom. 110
118
d
120
e
122
f
To Third Domain 130
Second Domain 120

FIGURE 3

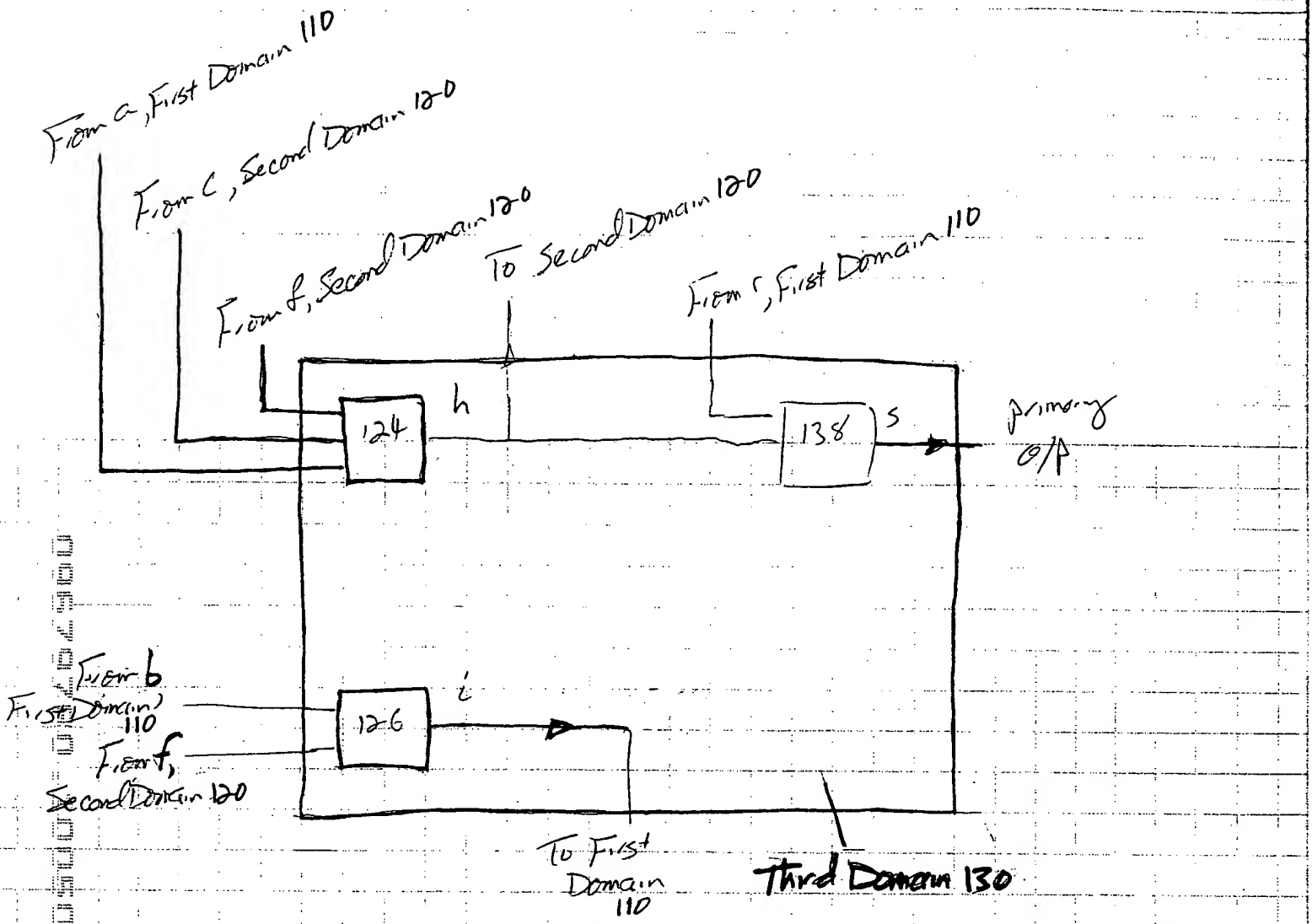

From a, First Domain 110
From c, Second Domain 120
From f, Second Domain 120
To Second Domain 120
From r, First Domain 110
124
h
138
s
primary o/p
From b, First Domain 110
From f, Second Domain 120
126
i
To First Domain 110
Third Domain 130

FIGURE 4

First Domain
Operation Stack 510

1	r = L136
2	n = L130
3	b = L114
4	a = fn (T,U)
5	L114 = fn (X,Y)
6	o = fn (k, b, z)
7	L130 = fn (i, k)
8	q = fn (n,o)
9	L136 = fn (k,q)

Second Domain
Operation Stack 520

1	c = L116
2	f = L122
3	L116 = fn (T, a)
4	d = fn (a, Y)
5	e = fn (d, w)
6	L122 = fn (a, e)
7	k = fn (i, h)

Third Domain
Operation Stack 530

1	h = fn (c,a,f)
2	i = fn (f, b)
3	s = fn (h, r)

FIGURE 5

First Domain
Operation Stack
610

1	**r**
2	**n**
3	**b**
4	**a**
5	**L114**
6	**o**
7	--
8	--
9	--
10	--
11	--
12	--
13	--
14	**L130**
15	**q**
16	--
17	--
18	--
19	--
20	--
21	--
22	**L136**

Second Domain
Operation Stack
620

1	**c**
2	**f**
3	**L116**
4	--
5	--
6	--
7	--
8	--
9	--
10	--
11	--
12	--
13	**d**
14	**e**
15	--
16	--
17	--
18	--
19	--
20	--
21	--
22	--
23	**L122**
24	**k**

Third Domain
Operation Stack
630

1	**h**
2	--
3	--
4	--
5	--
6	--
7	--
8	--
9	**i**
10	**s**

FIGURE 6

Merged Operation Stack 710

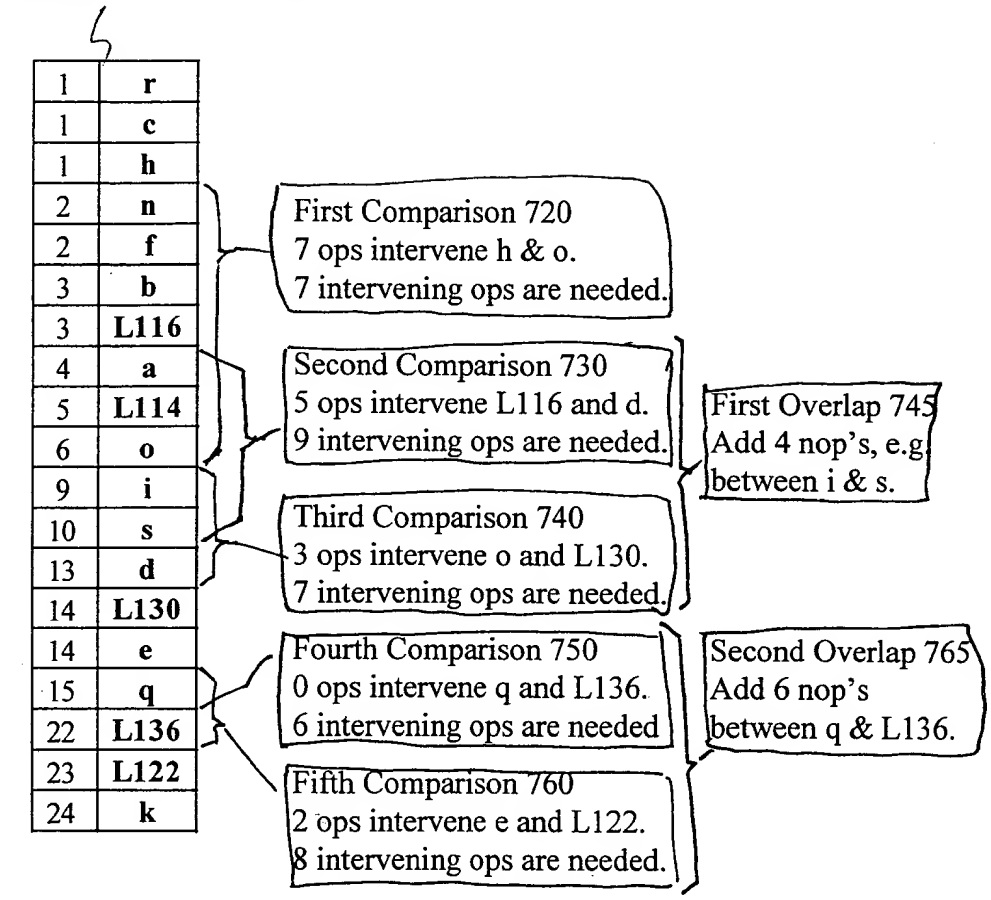


FIGURE 7

Merged Operation Stack 810

1	**r**
2	**c**
3	**h**
4	**n**
5	**f**
6	**b**
7	**L116**
8	**a**
9	**L114**
10	**o**
11	**i**
12	--
13	--
14	--
15	--
16	**s**
17	**d**
18	**L130**
19	**e**
20	**q**
21	--
22	--
23	--
24	--
25	--
26	--
27	**L136**
28	**L122**
29	**k**

FIGURE 8

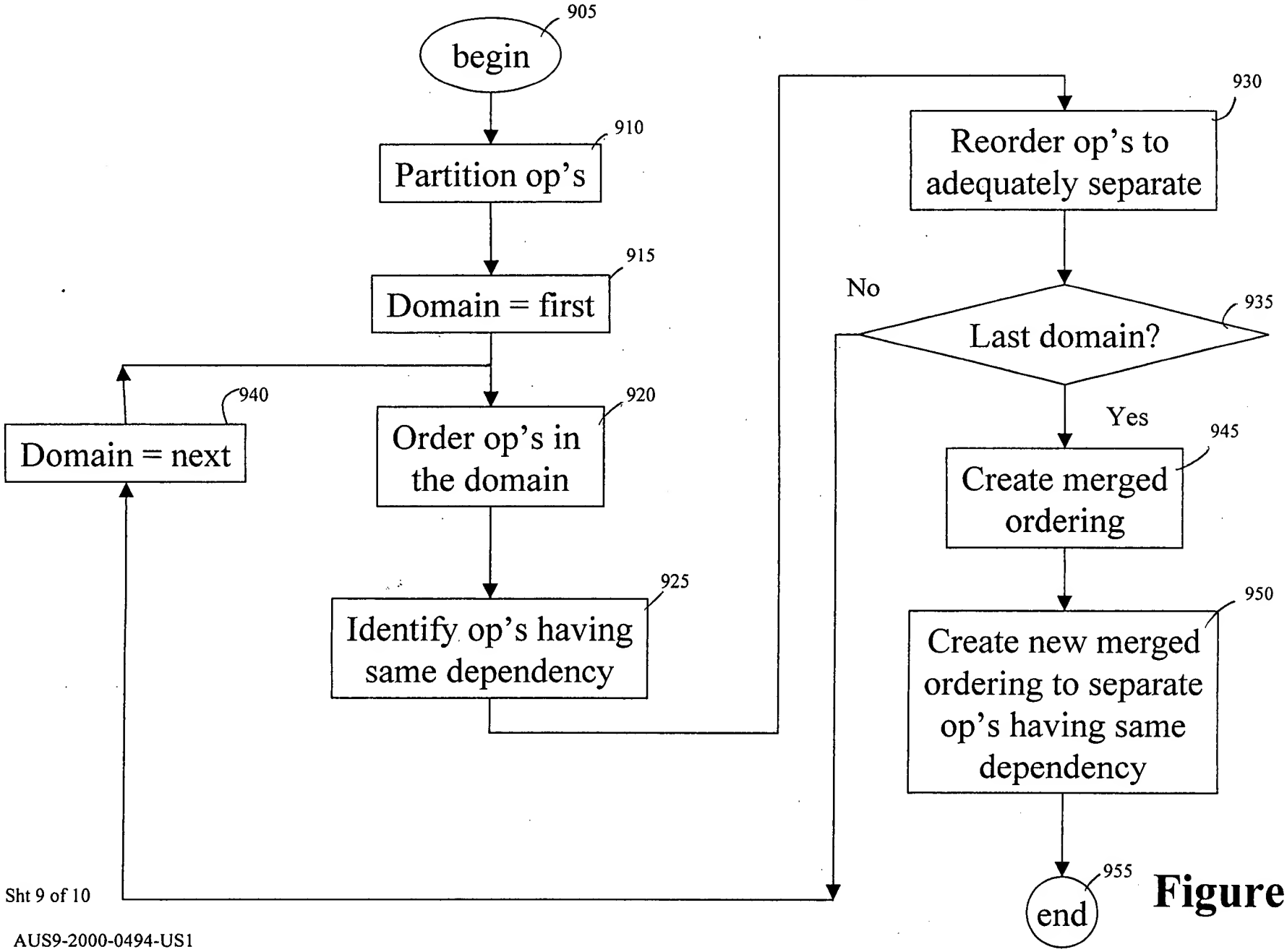
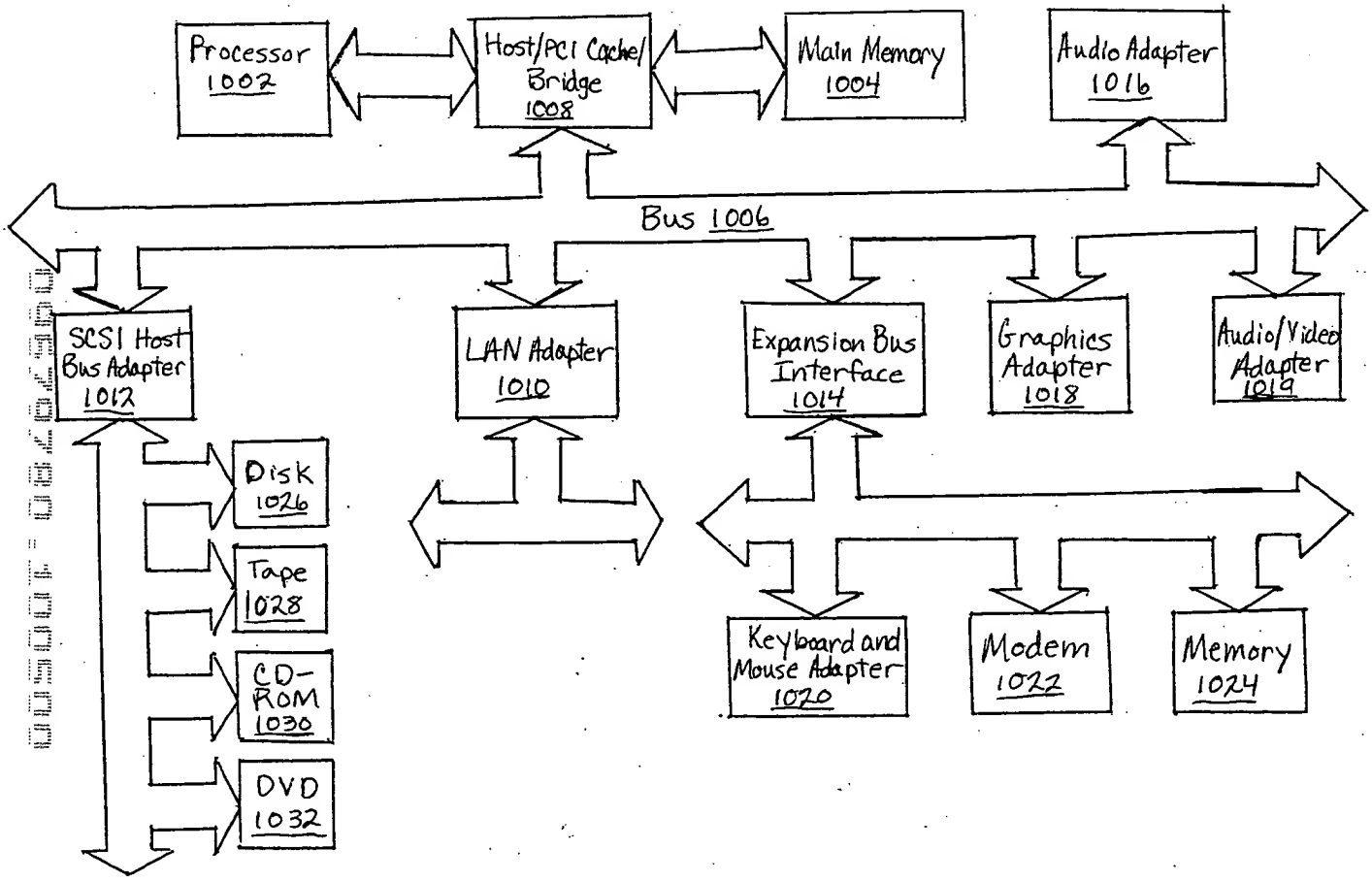

905
begin
910
Partition op's
915
Domain = first
920
Order op's in the domain
925
Identify op's having same dependency
930
Reorder op's to adequately separate
No
935
Last domain?
Yes
940
Domain = next
945
Create merged ordering
950
Create new merged ordering to separate op's having same dependency
955
end

Figure 9



1000

Figure 10